

What is claimed is:

1. A method for optimizing prices at which products are sold in an automated marketplace, comprising the steps of:

generating a matrix of all possible buyers and sellers;

for each buyer, providing a reserve price corresponding to a maximum purchase price;

for each seller, providing a reserve price corresponding to a minimum sales price;

calculating a utility value for each pairing of buyers and sellers;

selecting a unique pairing of buyers and sellers that maximizes total utility;

calculating a buyer optimal allocation of the total utility for all buyers and sellers in a stable manner;

calculating a seller optimal allocation of the total utility for all buyers and sellers in a stable manner; and

for each pair in the unique pairing, selecting a transaction price that allocates the utility between that seller and that buyer.

2. The method of Claim 1, wherein the step of providing a reserve price for each buyer comprises the step of:

for each buyer, providing a reserve price corresponding to a maximum purchase price, wherein at least one buyer limits the sellers to which the buyer agrees to be matched to a subset less than all possible sellers.

3. The method of Claim 2, wherein each buyer sets a reserve price for each possible seller with whom that buyer agrees to be matched, and wherein the reserve price can be different for each such seller.

4. The method of Claim 1, wherein the step of providing a reserve price for each seller comprises the step of:

for each seller, providing a reserve price corresponding to a minimum sales price, wherein at least one seller limits the buyers to which the seller agrees to be matched to a subset less than all possible buyers.

5. The method of Claim 4, wherein each seller sets a reserve price for each possible buyer with whom that seller agrees to be matched, and wherein the reserve price can be different for each such buyer.

6. The method of Claim 1, wherein the utility value calculated for each pairing of a buyer and a seller is a difference between that buyer's reserve price and that seller's reserve price.

7. The method of Claim 1, wherein the step of selecting a transaction price comprises the steps of:

providing a proportion value between 0 and 1; and

selecting a transaction price which is proportional to a difference between the optimized seller utility and the optimized buyer utility equal to the proportion value.

8. The method of Claim 7, wherein the proportion value equals .5.

9. The method of Claim 7, wherein the proportion value is less than .5.

10. The method of Claim 7, wherein the proportion value is greater than .5.

11. The method of Claim 1, further comprising the step of:

conducting product transactions at the selected transaction prices.

12. The method of Claim 1, wherein the buyers and sellers provide their respective reserve prices by communicating them to a central marketplace server.

13. A system for matching buyers and sellers in an automated marketplace, comprising:

a plurality of buyers for a product;

a plurality of sellers for the product;

a central system containing a matrix of all possible buyers and sellers for the product;

means for each buyer to select a reserve price representing a maximum purchase price for the product;

means for each seller to select a reserve price representing a minimum selling price for the product;

an optimizer within the central system for assigning a utility value to pairings between buyers and sellers, and calculating a set of such pairings to optimize a global utility value; and

means within the central system for assigning buyers and sellers according to the calculated optimized set of pairings, and assigning a stable transaction price for each pairing between the buyer's and seller's reserves for that pairing;

14. The system of Claim 13, wherein each buyer can set a different reserve price for each possible seller;

15. The system of Claim 13, wherein each seller can set a different reserve price for each buyer.

16. The system of Claim 13, wherein the assigned utility value for each pairing is equal to a difference in the buyer's reserve and the seller's reserve for that pairing.

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